ABSTRACT OF THE INVENTION

In computerized recognition having multiple experts, a method and system is described that obtains an optimum value for an expert tuning parameter in a single pass over sample tuning data. Each tuning sample is applied to two experts, resulting in scores from which ranges of parameters that correct incorrect recognition errors without changing correct results for that sample are determined. To determine the range data for a given sample, the experts return scores for each prototype in a database, the scores separated into matching and non-matching scores. The matching and non-matching scores from each expert are compared, providing upper and lower bounds defining ranges. Maxima and minima histograms track upper and lower bound range data, respectively. An analysis of the histograms based on the full set of tuning samples provides the optimum value. For tuning multiple parameters, each parameter may be optimized by this method in isolation, and then iterated.